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**REMARKS****Claim Amendments**

Claims 9 and 12 have been canceled without prejudice.

Claims 1, 29, and 30 have been amended to recite that "the olefin-alkyl (meth)acrylate copolymer is the polymerization product of (a) an olefin selected from ethylene and C<sub>3</sub>-C<sub>8</sub>  $\alpha$ -olefins, and (b) an alkyl (meth)acrylate, wherein the alkyl group is selected from methyl, propyl, n-butyl, n-pentyl, n-hexyl, n-heptyl, n-octyl." Support for this amendment may be found in claims 9 and 12 as filed.

Claim 10 has been amended to specify that the olefin used to form the olefin-alkyl (meth)acrylate copolymer is selected from ethylene and C<sub>3</sub>-C<sub>8</sub>  $\alpha$ -olefins. Support for this amendment may be found in claim 9 as filed.

Claim 11 has been amended to depend from claim 10.

Claim 13 has been amended to delete "ethylene-ethyl acrylate copolymer" from the Markush group.

Claim 32 has been amended to refer to claim 29.

**Revised Restriction Requirement**

Applicants thank the Examiner for considering their remarks in response to the original restriction requirement and for revising the restriction requirement accordingly. 2/24/05 Office Action, page 2.

**Duplicate Claim**

The Examiner correctly noted that claim 32 was a duplicate of claim 31. 2/24/05 Office Action, page 2. Claim 32 has been amended to incorporate by reference the composition of claim 29, thereby distinguishing claim 32 from claim 31.

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Claim Rejections Under 35 U.S.C. § 102(b) or § 103(a)

Claims 1-26 and 29-32 stand rejected under 35 U.S.C. § 102(a), as allegedly anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent Application Publication No. 2002/0169256 of Merfeld et al. ("Merfeld") of record on 1449. Applicants respectfully traverse this rejection.

Merfeld generally describes a curable composition comprising a functionalized poly(arylene ether), an alkenyl aromatic monomer, an acryloyl monomer, and a polymeric additive having a glass transition temperature less than or equal to 100° C and a Young's modulus less than or equal to 1000 megapascals at 25° C. Merfeld abstract. The only olefin-alkyl (meth)acrylate copolymer mentioned by Merfeld is "ethylene-ethyl acrylate[]" copolymer in paragraph [0084].

Applicants' claims 1-26 and 29-32 are not anticipated by Merfeld because Merfeld does not teach the olefin-alkyl (meth)acrylate copolymers therein. Anticipation requires that all of the elements of the claim be found within a single prior art reference. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). Applicants' independent claims 1, 29, and 30 have been amended to recite olefin-alkyl (meth)acrylate copolymers that do not read on ethylene-ethyl acrylate copolymer. Merfeld therefore fails to teach the olefin-alkyl (meth)acrylate copolymer recited in each of claims 1, 29, and 30. Accordingly, Merfeld cannot anticipate these claims. Because claims 2-26 each depend ultimately from and further limit claim 1, and because claims 31 and 32 incorporate by reference the compositions of claims 1 and 29, respectively, claims 1-26 and 29-32 are not anticipated by Merfeld. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 1-26 and 29-32 under 35 U.S.C. § 102(a) over Merfeld.

Claims 1, 7-20, 22-26 and 29-32 are rejected under 35 U.S.C. § 102(b) as allegedly anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 3,665,058 to Snodgrass et al.

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Snodgrass generally describes blends containing 75-99 weight percent "polyphenylene oxide resin" and 1-25 weight percent poly(ethylene-co-organic-acid-ester)resin. Snodgrass, col. 1, lines 35-47.

Applicants' claims 1, 7-20, 22-26 and 29-32 are not anticipated by Snodgrass because Snodgrass does not teach the "functionalized poly(arylene ether)" required by these claims. Applicants' independent claims 1, 29, and 30 each require a "functionalized poly(arylene ether)." The term "functionalized poly(arylene ether)" is defined in Applicants' specification at paragraph [0003] as "a capped poly(arylene ether), a ring-functionalized poly(arylene ether), or a maleic anhydride-functionalized poly(arylene ether)." These terms are defined, in turn, in paragraphs [0004], [0015], and [0017] of the specification, respectively. None of Snodgrass' "polyphenylene oxide resins" satisfy the definition of Applicants' "functionalized poly(arylene ether)." Snodgrass therefore fails to teach Applicants' "functionalized poly(arylene ether)." Because claims 7-26 each depend ultimately from and further limit claim 1, and because claims 31 and 32 incorporate by reference the compositions of claims 1 and 29, respectively, claims 1, 7-20, 22-26 and 29-32 are not anticipated by Snodgrass. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 1-26 and 29-32 under 35 U.S.C. § 102(b) over Snodgrass.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-26 and 29-32 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 6,352,782 to Yeager et al. ("Yeager"). Applicants respectfully traverse this rejection.

Yeager generally describes compositions comprising (1) a poly(phenylene ether) compound in which at least a portion of the hydroxyl groups have been reacted with a compound containing carbon-carbon double bonds, and (2) a curable unsaturated monomer. Yeager abstract. As acknowledged by the examiner, Yeager does not disclose using an olefin-alkyl(meth)acrylate copolymer.

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Claims 1-26 and 29-32 are patentable over Yeager because Yeager fails to teach or suggest the olefin-alkyl(meth)acrylate copolymer required by those claims. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a prima facie case of obviousness requires that all limitations of the claim be taught or suggested by the prior art. *See, e.g., CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Royka*, 490 F.2d 981, 985 (C.C.P.A. 1974).

Applicants' independent claims 1, 29, and 30 each require an "olefin-alkyl(meth)acrylate copolymer." As acknowledged by the Examiner, Yeager does not disclose an olefin-alkyl(meth)acrylate copolymer. Nevertheless, the Examiner appears to suggest that Yeager renders the use of such copolymers obvious. Specifically, the Examiner states,

However, the reference does disclose the use of an alkyl acrylate monomer, such as methyl acrylate monomer, as stated above. And further the presence of homopolymers or copolymers of ethylene (see col. 10, lines 42-43).

Note also that the instant claim 9 does disclose that the alkyl(meth)acrylate copolymer is the polymerization product of an olefin and an alkyl(meth)acrylate; and the reference does disclose the copolymers of ethylene (see col. 10, lines 42-43) and the methyl methacrylate (see col. 9, line 5).

Therefore, it would have been obvious to one of skill in the art to copolymerize an olefin such as ethylene and a methyl methacrylate from the reference to form the claimed olefin-methyl methacrylate copolymer of the instant claims, with the claimed functionalized poly(arylene ether) to form the claimed composition, since they have been shown to be effective in a similar system and thus would have been expected to provide adequate results. There is no showing of unexpected results derived from said use.

2/24/05 Office Action, pages 5-6.

Applicants respectfully disagree that Yeager teaches or suggests the use of an olefin-alkyl(meth)acrylate copolymer. It is true that the reference discloses methyl acrylate among the many monounsaturated compounds that are suitable for use as the "curable unsaturated monomer". Yeager, col. 8 line 60 through col. 9, line 14. However,

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these compounds are used as curable components of the composition. There is no suggestion to first copolymerize them with ethylene before adding them to the composition. Indeed, such a suggestion would be contrary to the stated purpose of methyl acrylate as a "curable unsaturated monomer." It is also true the Yeager mentions "homopolymers or copolymers of ethylene," but these compounds are mentioned for use as "thermoplastic elastomers." Yeager, col. 10, lines 39-49. Yeager mentions the following specific examples of "homopolymers or copolymers of ethylene": "polyethylene, ethylene-propylene copolymer and ethylene-propylene-diene terpolymers, [and] ethylene-ethylene oxide copolymers." Contrary to the Examiner's assertion, which improperly links two unrelated parts of Yeager's specification, Yeager does not teach or suggest copolymers of ethylene with alkyl (meth)acrylate monomers. Applicants do not dispute that their claim 9 discloses that the olefin-alkyl (meth)acrylate copolymer can be the polymerization product of an olefin and an alkyl (meth)acrylate. However, Applicants' own specification cannot be used as a reference against them, particularly not to remedy the failure to Yeager to teach or suggest using an olefin-alkyl(meth)acrylate copolymer.

Applicants further dispute any suggestion that Yeager provides an expectation of success for Applicants' compositions comprising an olefin-alkyl (meth)acrylate copolymer. "Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure." *In re Dow Chemical Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988). The Examiner asserts that the olefin-alkyl (meth)acrylate copolymers "have been shown to be effective in a similar system and thus would have been expected to provide adequate results." 2/24/05 Office Action, pages 5-6. There is simply no such teaching in Yeager. Because Yeager does not teach or suggest the use of olefin-alkyl (meth)acrylate copolymers, Yeager cannot possibly show such polymers to be effective or provide an expectation for their success in Applicants' claimed compositions.

To summarize, Yeager provides neither the suggestion nor the expectation of success for Applicant's claim 1, 29, and 30 compositions comprising olefin-alkyl (meth)acrylate copolymers. Because claims 2-26 depend ultimately from and further

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limit claim 1, and because claims 31 and 32 incorporate by reference the compositions of claims 1 and 29, respectively, claims 1-26 and 29-32 are all patentable over Yeager.


For all of the above reasons, Applicants' respectfully request the reconsideration and withdrawal of the rejection of claims 1-26 and 29-32 under 35 U.S.C. § 103(a) over Yeager.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 07-0862 maintained by Assignee.

Respectfully submitted,

CANTOR COLBURN LLP  
Applicants' Attorneys

By:   
J. Michael Buchanan  
Registration No. 44,571

Date: April 26, 2005  
Customer No.: 23413  
Telephone: (860) 286-2929